



# UNIVERSITATEA DE ȘTIINȚE AGRICOLE ȘI MEDICINĂ VETERINARĂ CLUJ-NAPOCA

Calea Mănăstur 3-5, 400372, Cluj-Napoca

Tel: 0264-596.384, Fax: 0264-593.792

www.usamvcluj.ro

No. \_\_\_\_\_ of \_\_\_\_\_

USAMV form CN-0702040114

## SUBJECT OUTLINE

### 1. Information on the programme

|                                      |                                                                            |
|--------------------------------------|----------------------------------------------------------------------------|
| 1.1. Higher education institution    | University of Agricultural Sciences and Veterinary Medicine of Cluj-Napoca |
| 1.2. Faculty                         | Faculty of Food Science and Technology                                     |
| 1.3. Department                      | Food Engineering                                                           |
| 1.4. Field of study                  | Food Engineering                                                           |
| 1.5. Education level                 | Bachelor                                                                   |
| 1.6. Specialization/ Study programme | Control and expertise of food products                                     |
| 1.7. Form of education               | Full time                                                                  |

### 2. Information on the discipline

|                                               |                                  |               |      |                         |            |                        |                             |    |
|-----------------------------------------------|----------------------------------|---------------|------|-------------------------|------------|------------------------|-----------------------------|----|
| 2.1. Name of the discipline                   | Practice for the diploma project |               |      |                         |            |                        |                             |    |
| 2.2. Course coordinator                       |                                  |               |      |                         |            |                        |                             |    |
| 2.3. Seminar/ laboratory/ project coordinator | Borșa Andrei, PhD, Lecturer      |               |      |                         |            |                        |                             |    |
| 2.4. Year of study                            | IV                               | 2.5. Semester | VIII | 2.6. Type of evaluation | continuous | 2.7. Discipline status | Content <sup>2</sup>        | DS |
|                                               |                                  |               |      |                         |            |                        | Compulsoriness <sup>3</sup> | DI |

### 3. Total estimated time (teaching hours per semester)

|                                                                                             |      |                            |   |                                   |       |
|---------------------------------------------------------------------------------------------|------|----------------------------|---|-----------------------------------|-------|
| 3.1. Hours per week – full time programme                                                   | 4.28 | out of which: 3.2. lecture | - | 3.3. seminar/ laboratory/ project | 4.28  |
| 3.4. Total number of hours in the curriculum                                                | 60   | Out of which: 3.5. lecture | - | 3.6. seminar/ laboratory          | 60    |
| Distribution of the time allotted                                                           |      |                            |   |                                   | hours |
| 3.4.1. Study based on book, textbook, bibliography and notes                                |      |                            |   |                                   | 15    |
| 3.4.2. Additional documentation in the library, specialized electronic platforms and field  |      |                            |   |                                   | 10    |
| 3.4.3. Preparing seminars/ laboratories/ projects, subjects, reports, portfolios and essays |      |                            |   |                                   | 20    |
| 3.4.4. Tutorials                                                                            |      |                            |   |                                   | 5     |
| 3.4.5. Examinations                                                                         |      |                            |   |                                   | 4     |
| 3.4.6. Other activities                                                                     |      |                            |   |                                   | 6     |
| 3.7. Total hours of individual study                                                        | 60   |                            |   |                                   |       |
| 3.8. Total hours per semester                                                               | 120  |                            |   |                                   |       |
| 3.9. Number of credits <sup>4</sup>                                                         | 4    |                            |   |                                   |       |

### 4. Prerequisites (is applicable)

|                         |                                                                                   |
|-------------------------|-----------------------------------------------------------------------------------|
| 4.1. curriculum-related | Operations and machinery in the food industry, raw vegetable and animal materials |
| 4.2. skills-related     | The student must have general knowledge of food engineering                       |

### 5. Conditions (if applicable)

|                      |                                                                                                                                                                           |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5.1. for the lecture | During practical activities, the students will present themselves in the pilot stations or at the economic agents in the scheduled period with the results of the medical |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



## UNIVERSITATEA DE ȘTIINȚE AGRICOLE ȘI MEDICINĂ VETERINARĂ CLUJ-NAPOCA

Calea Mănăstur 3-5, 400372, Cluj-Napoca

Tel: 0264-596.384, Fax: 0264-593.792

www.usamvcluj.ro

|                                           |                                                                                                                                                                                                                                              |
|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                           | analyzes according to the sanitary-veterinary norms in force and will carry out activities with the raw and auxiliary materials provided. The use of protective equipment such as a robe and cap is mandatory during practical activities.   |
| 5.2. for the seminar/ laboratory/ project | During practical works, each student will develop an individual activity with laboratory materials (made available in the book that describes the laboratory work). Academic discipline is imposed throughout the course of practical works. |

### 6. Specific competences acquired

|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Professional competences | C2.3. Application of basic engineering principles and methods for solving technological problems in the agri-food chain and for the design of new food products<br>C3.2. Explain and interpret the principles and methods used in technological processes in the food chain<br>C3.3 Monitor and control technological processes in the food industry, identify abnormal situations and propose solutions                                                                                                                                                                                                                                                             |
| Transversal competences  | CT1 Apply strategies of perseverance, rigor, efficiency and responsibility at work, punctuality and taking responsibility for the results of personal activity, creativity, common sense, analytical and critical thinking, problem solving, etc., based on the principles, norms and values of the code of professional ethics in the food field<br>CT3 Efficient use of various ways and techniques of learning - training for the acquisition of bibliographic and electronic database information both in Romanian and in an international language, as well as assessing the need and usefulness of extrinsic and intrinsic motivations of continuing education |

### 7. Course objectives (based on the list of competences acquired)

|                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7.1. Overall course objective | To ensure the consolidation of the theoretical knowledge and the development of the communication and organization skills of the graduate of the bachelor cycle in accordance with the principles of food technologies, to solve engineering and technological problems and to facilitate their insertion on the labor market.                                                                                                                                                                         |
| 7.2. Specific objectives      | To acquire the knowledge regarding the legislation in force and the instructions for safety and health at work specific to the food practice<br>To understand the role and the way of organization, development and evaluation of the internship for the elaboration of the Bachelor Diploma and to use efficiently and planned the various ways and techniques of learning<br>To acquire general knowledge regarding the management of production processes and the management of production quality. |

### 8. Content

|                                                                                                                             |                                                           |                                          |
|-----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|------------------------------------------|
| <b>8.1. LECTURE</b><br>Number of hours –                                                                                    | Teaching methods<br>-                                     | Notes<br>-                               |
| <b>8.2. PRACTICAL WORK</b><br>Number of hours –60:                                                                          | Theoretical presentation of practical works               | 1 lab work<br>(2 hours / work)           |
| Technological practice in individual system in a profile unit or in a pilot station - documentation for the diploma project |                                                           | 15 individual practical works = 30 hours |
| Opportunity and justification of the chosen topic                                                                           | Explanation, conversation                                 | 1 seminar = 2 hours                      |
| Documentary study                                                                                                           | Explanation, conversation                                 | 1 seminar = 2 hours                      |
| The final choice of technological manufacturing schemes with detailing the parameters                                       | Explanation, problematization<br>conversation, case study | 1 seminar = 2 hours                      |
| Technological calculation                                                                                                   | Explanation, problematization<br>conversation, case study | 3 seminars = 6 hours                     |
| Equipment calculation                                                                                                       | Explanation, conversation                                 | 2 seminars = 4 hours                     |
| Quality and hygiene management in the designed                                                                              | Explanation, problematization                             | 2 seminars = 4 hours                     |



# UNIVERSITATEA DE ȘTIINȚE AGRICOLE ȘI MEDICINĂ VETERINARĂ CLUJ-NAPOCA

Calea Mănăstur 3-5, 400372, Cluj-Napoca

Tel: 0264-596.384, Fax: 0264-593.792

www.usamvcluj.ro

|                                                                                                                                                                                                                                            |                                                           |                      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|----------------------|
| section                                                                                                                                                                                                                                    | conversation, case study                                  |                      |
| Economic calculation                                                                                                                                                                                                                       | Explanation, problematization<br>conversation, case study | 2 seminars = 4 hours |
| The graphic part (at least the sketch of the designed section and the sketch of its general location; scores are awarded additional for all utility diagrams, diagram operations, equipment schedule, equipment representations and so on) | Explanation, conversation                                 | 3 seminars = 6 hours |
| <i>Compulsory bibliography:</i><br>All subjects in the curriculum are specific to the chosen topic.<br>Technology-specific guidance / design notes.                                                                                        |                                                           |                      |
| <i>Optional bibliography:</i><br>C. Banu ș.a- Manualul inginerului de industrie alimentară, Editura Tehnică, vol. I și II                                                                                                                  |                                                           |                      |

## 9. Corroborating the course content with the expectations of the epistemic community representatives, of the professional associations and of the relevant stakeholders in the corresponding field

The content of the discipline is in accordance with the requests of specific national professional associations

## 10. Assessment

| Type of activity                                                       | 10.1. Assessment criteria                                 | 10.2. Assessment methods                                   | 10.3. Percentage of the final grade |
|------------------------------------------------------------------------|-----------------------------------------------------------|------------------------------------------------------------|-------------------------------------|
| <b>10.4. Lecture</b>                                                   | -                                                         | -                                                          |                                     |
| <b>10.5. Seminar/Laboratory</b>                                        | Observance of working procedures, verification of results | Presentation of the results related to the license project | 100%                                |
| <b>10.6. Minimum performance standards</b>                             |                                                           |                                                            |                                     |
| Completion of experimental activities related to the bachelor project. |                                                           |                                                            |                                     |

<sup>1</sup> Education levels- choose of the three options: Bachelor/ \* Master/Ph.D.

<sup>2</sup> Discipline status (content)- for the undergraduate level, choose one of the options:- **FD** (fundamental discipline), **BD** (basic discipline), **CS** (specific disciplines-clinical sciences), **AP** (specific disciplines-animal production), **FH** (specific disciplines-food hygiene), **UO** (disciplines based on the university's options).

<sup>3/</sup> Discipline status (compulsoriness)- choose one of the options – **CD** ( compulsory discipline) **OD** (optional discipline) **ED** ( elective discipline).

<sup>4</sup> One credit is equivalent to 25-30 hours of study (teaching activities and individual study).

<sup>5/ \*</sup> Disciplines: AK- Advanced knowledge, CT- Complementary Training, S- Synthesis

Filled in on  
10.09.2021

Course coordinator  
.....

Laboratory work/seminar coordinator  
Borșa Andrei, PhD, Lecturer

Subject coordinator  
Borșa Andrei, PhD, Lecturer

Head of the Department  
Sevastița Muste PhD, Professor

Approved by the  
Department on  
22.09.2021

Approved by the Faculty  
Council on  
28.09.2021

Dean  
Elena Mudura PhD, Professor



## UNIVERSITATEA DE ȘTIINȚE AGRICOLE ȘI MEDICINĂ VETERINARĂ CLUJ-NAPOCA

Calea Mănăștur 3-5, 400372, Cluj-Napoca

Tel: 0264-596.384, Fax: 0264-593.792

[www.usamvcluj.ro](http://www.usamvcluj.ro)